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INDEXES OF OUTPUT PER MAN-HOUR, HOURLY COMPENSATION, AND UNIT LABOR COSTS
IN THE PRIVATE SECTOR OF THE ECONOMY AND THE NONFARM SECTOR, 1947-66

This release provides information on hourly compensation, unit labor costs and nonlabor payments, prices, and output per man-hour for the private sector of the economy and the nonfarm sector during the period 1947-66. These data are useful in studying the relationship between prices, costs, and productivity. In their use however, it is important to recognize certain statistical and conceptual limitations.

1. Limitations and qualifications

The indexes for the total and nonfarm sectors of the private economy reflect the divergent movements of the various industries, such as manufacturing, mining, trade, construction, services, etc., which constitute the total. Therefore, trends for the private economy and nonfarm sector may not necessarily be representative of any individual industry.

The indexes reflect changes within the various component industries as well as shifts in the relative importance of each of the industries. For example, output per man-hour for the private sector is influenced not only by changes in productivity in each of the separate industries making up the total, but also by shifts in the relative importance of each industry. Similarly, the estimate of average hourly compensation is affected by shifts in employment from low to high earnings industries and vice versa. The index of unit labor costs also is influenced by changes in the relative importance of industries with different unit labor costs.

Caution should be exercised in ascribing cause and effect relationships, particularly with respect to price changes, since prices are subject to numerous influences of changing market conditions and costs of production. Change in price generally cannot be explained by reference to any single factor, even one as large as labor costs. Increased demand for a product may also lead to price and wage increases. There is a strong interaction between demand and costs. It is not possible to determine from figures alone whether wage increases cause price increases or vice versa.

Although the data on the attached table are useful in comparing prices with unit labor costs and nonlabor payments, it is emphasized that year-to-year changes in productivity, earnings, and prices or in the relationship between these factors are not uniform and are not necessarily indicative of a basic change in trend or relationships.

2. Hourly compensation

The term "compensation" includes wages and salaries plus supplemental payments such as contributions of employers to social security and private health and insurance funds. The "all persons" compensation data include an estimate for proprietors' salaries and supplementary payments.

The figures on "real" compensation are derived from the actual compensation data adjusted to reflect changes in purchasing power. This is done by deflating the compensation figures by the Consumer Price Index.

4. Prices and costs

The price index (total payment in current dollars per unit of output) is derived by dividing the actual dollar estimate of gross product by the constant dollar estimate (i.e., output in constant prices). Both the current and constant dollar estimates are published by the Office of Business Economics of the Department of Commerce.

This price index represents the change in price of all final goods and services produced by the private sector of the economy. "Price" may be viewed as the sum of all the costs of production and distribution per unit--that is, the sum of unit labor costs and unit nonlabor payments. Nonlabor payments include profits, noncorporate income, depreciation, indirect business taxes, and other income or costs. Materials and intermediate services are not considered as separate cost elements in this concept of price (or cost) since the payments for labor, profits, etc., are cumulative, covering all stages of production and distribution, from raw materials to final product.

The index of prices (used to deflate the value of private output) reflects the change in all the costs of production and distribution in the private sector of the economy. It is not the same as the Consumer Price Index, which is used to deflate current dollar earnings in order to obtain real earnings (in constant dollars). The Consumer Price Index reflects the change in the price of those goods and services, including farm products, which are usually purchased by consumers.

Table 1: Indexes of Output Per Man-Hour, Hourly Compensation, and Unit Labor Costs in the Private Sector of the Economy, 1947-66

(1957-59=100)

Year	Output per man-hour			Compensation per man-hour			Real compensation per man-hour			Prices and costs				
	Total private		Nonfarm	Total private		Nonfarm	Total private		Nonfarm	Total private				Nonfarm
	All persons	Em- ploy- ees	All persons	All ^{1/} persons	Em- ploy- ees	All ^{1/} persons	All persons	Em- ploy- ees	All persons	Prices ^{2/}	Unit labor costs ^{3/}	Unit nonlabor payments	Prices ^{2/}	Unit labor costs ^{3/}
1947 . .	69.1	74.7	74.3	54.9	55.7	56.3	70.6	71.6	72.4	76.3	79.4	71.3	73.5	75.7
1948 . .	72.1	77.1	76.6	59.9	60.6	61.4	71.5	72.3	73.3	81.6	83.1	79.4	78.5	80.1
1949 . .	74.4	80.3	79.6	60.7	62.2	63.0	73.1	74.9	75.9	80.7	81.6	79.5	79.1	79.2
1950 . .	80.5	85.2	84.6	64.9	65.8	66.6	77.4	78.5	79.5	81.5	80.6	83.1	80.0	78.7
1951 . .	82.9	86.3	86.4	71.2	71.8	72.4	78.7	79.3	80.0	87.4	85.9	90.2	85.2	83.8
1952 . .	84.4	87.2	87.1	75.4	75.9	76.3	81.5	82.1	82.5	89.3	89.4	89.0	87.3	87.6
1953 . .	88.0	89.8	89.7	80.2	80.3	80.6	86.1	86.2	86.5	89.9	91.1	87.7	88.9	89.9
1954 . .	90.0	92.5	91.6	82.5	83.1	83.0	88.1	88.8	88.7	91.0	91.7	89.8	90.4	90.6
1955 . .	94.0	95.4	95.7	84.6	85.5	85.9	90.7	91.6	92.1	91.7	90.0	94.5	91.6	89.8
1956 . .	94.1	95.1	95.2	90.0	90.8	91.0	95.0	95.9	96.1	94.8	95.7	93.2	94.7	95.6
1957 . .	96.9	97.2	97.2	95.8	96.2	96.2	97.8	98.2	98.2	98.1	98.9	96.9	98.3	98.9
1958 . .	99.8	100.0	99.7	99.8	99.7	99.8	99.1	99.0	99.1	100.2	100.0	100.5	99.9	100.1
1959 . .	103.4	102.8	103.1	104.4	104.1	104.2	102.9	102.6	102.7	101.5	101.0	102.5	101.7	101.1
1960 . .	105.0	103.7	104.4	108.5	107.9	108.4	105.2	104.7	105.1	103.0	103.3	102.5	103.2	103.8
1961 . .	108.5	107.1	107.3	112.4	111.6	111.6	107.9	107.1	107.1	104.0	103.6	104.6	104.1	104.0
1962 . .	113.6	111.3	112.2	117.3	116.0	116.2	111.3	110.1	110.2	104.9	103.3	107.7	105.1	103.5
1963 . .	117.6	114.1	115.6	122.0	120.1	120.4	114.3	112.6	112.8	106.0	103.7	110.0	106.3	104.1
1964 . .	122.1	117.9	119.9	128.2	125.8	126.1	118.6	116.4	116.7	107.4	104.9	111.3	107.7	105.2
1965 . .	125.5	120.6	122.4	132.9	130.3	130.2	120.9	118.6	118.5	109.1	105.9	114.4	109.2	106.3
1966 . .	129.0	122.3	125.3	141.6	137.8	137.5	125.2	121.8	121.6	112.0	109.8	115.7	111.8	109.8

^{1/} Wages and salaries of employees plus employers contributions for social insurance and private benefits plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

^{2/} Total payments in current dollars per unit of output (GNP Deflator).

^{3/} Compensation for all persons per unit of output.

Table 2: Underlying Data: Indexes of Gross Product, Man-Hours, Compensation, and Nonlabor Payments in the Private Sector of the Economy, 1/ 1947-66

(1957-59=100)

Year	Gross product				Man-Hours				Compensation in current dollars				Nonlabor payments in current dollars		Consumer price index
	In 1958 dollars		In current dollars		Total private		Nonfarm		Total private		Nonfarm		Total private	Nonfarm	
	Total private	Nonfarm	Total private	Nonfarm	All persons	Employees	All persons	Employees	All persons	Employees					
1947	67.6	66.8	51.6	49.1	97.8	90.5	89.9	89.2	53.7	50.4	50.6	49.8	48.2	46.5	77.8
1948	70.8	69.8	57.8	54.8	98.2	91.8	91.1	90.4	58.8	55.6	55.9	54.9	56.2	52.9	83.8
1949	70.6	69.7	57.0	55.1	94.9	87.9	87.6	86.3	57.6	54.7	55.2	54.0	56.1	55.0	83.0
1950	77.9	77.0	63.5	61.6	96.8	91.4	91.0	90.1	62.8	60.1	60.6	59.5	64.7	63.4	83.8
1951	82.8	82.5	72.4	70.3	99.9	96.0	95.5	95.1	71.1	68.9	69.1	68.4	74.7	72.2	90.5
1952	84.8	84.5	75.7	73.8	100.5	97.2	97.0	96.7	75.8	73.8	74.0	73.4	75.5	73.5	92.5
1953	89.1	88.8	80.1	78.9	101.3	99.2	99.0	99.1	81.2	79.7	79.8	79.4	78.1	77.4	93.2
1954	87.9	87.4	80.0	79.0	97.7	95.0	95.4	95.1	80.6	78.9	79.2	78.7	78.9	78.6	93.6
1955	95.4	95.1	87.5	87.1	101.5	100.0	99.4	99.6	85.9	85.5	85.4	85.5	90.2	90.1	93.3
1956	97.2	97.1	92.1	92.0	103.3	102.2	102.0	102.1	93.0	92.8	92.8	92.8	90.6	90.6	94.7
1957	98.6	98.6	96.7	96.9	101.8	101.4	101.4	101.4	97.5	97.5	97.5	97.5	95.5	95.9	98.0
1958	97.3	97.2	97.5	97.1	97.5	97.3	97.5	97.2	97.3	97.0	97.3	96.9	97.8	96.8	100.7
1959	104.1	104.2	105.7	106.0	100.7	101.3	101.1	101.4	105.1	105.5	105.3	105.6	106.7	107.3	101.5
1960	106.6	106.7	109.8	110.1	101.5	102.8	102.2	102.5	110.1	110.9	110.8	111.0	109.3	108.9	103.1
1961	108.6	108.7	112.9	113.2	100.1	101.4	101.3	101.4	112.5	113.2	113.1	113.2	113.6	113.5	104.2
1962	116.0	116.5	121.7	122.4	102.1	104.1	103.8	104.3	119.8	120.9	120.6	121.0	124.9	125.5	105.4
1963	120.8	121.4	128.1	129.0	102.7	105.9	105.0	106.1	125.3	127.2	126.4	127.3	132.9	133.6	106.7
1964	127.5	128.6	136.9	138.5	104.4	108.1	107.3	108.5	133.8	136.0	135.3	136.4	141.9	143.9	108.1
1965	135.3	136.4	147.6	148.9	107.8	112.2	111.4	113.0	143.3	146.2	145.0	146.6	154.8	155.7	109.9
1966	142.5	144.3	159.6	161.3	110.5	116.5	115.2	117.7	156.5	160.5	158.4	161.1	164.9	166.2	113.1

1/ These data were basic measures used to develop the indexes of output per man-hour, hourly compensation, unit labor costs, and unit nonlabor payments.

Source: Current and constant dollar gross product and employee compensation data from the Office Business Economics, U.S. Department of Commerce. Man-hours, compensation of all persons, and consumer price index data from the Bureau of Labor Statistics, U.S. Department of Labor.